

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2000009250
PUBLICATION DATE : 11-01-00

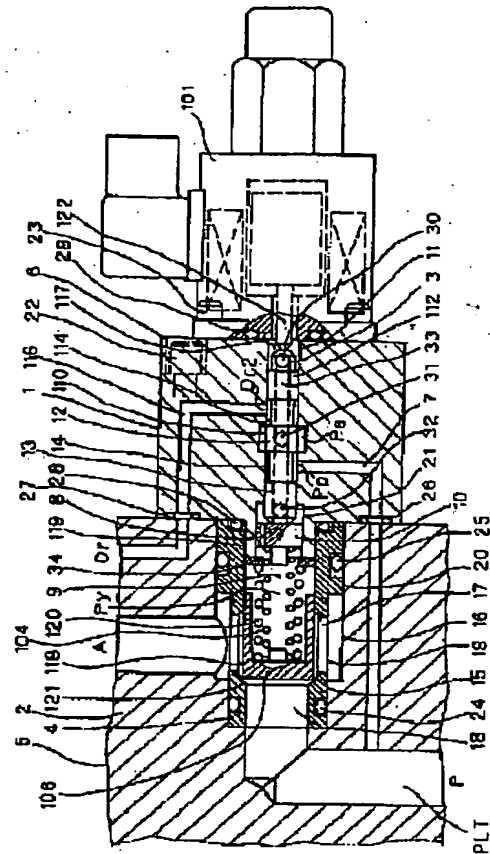
APPLICATION DATE : 22-06-98
APPLICATION NUMBER : 10213414

APPLICANT : MASUDA KENJI;

INVENTOR : MASUDA KENJI;

INT.CL. : F16K 31/06 F15B 13/043 F16K 31/42

TITLE : PROPORTIONAL THROTTLE VALVE



ABSTRACT : **PROBLEM TO BE SOLVED:** To provide a proportional throttle valve that stabilizes an associated system, keeps its own responsiveness intact, has a strong resistance to disturbances all for high precision and high efficiency, through positive utilization of its operating chamber, which includes a feedback spring and lies between the pilot spool of a three-way pilot valve and the main spool of a pilot-operated main valve, as a cooperative damping chamber via a resistance element.

SOLUTION: The proportional throttle valve comprises an electromagnetic actuator, a three-way pilot valve having a pilot line Pp a control line Pa and a return line Dr2, a pilot-operated main valve in which at least pressures in a pressure line PLT and an operating chamber Py are opposite to each other, and a feedback spring 104 disposed in the operating chamber Py. Another pilot line 7 is laid from the pressure line PLT to the pilot line Pp, and the operating chamber Py and control line Pa are connected via a resistance element 8, so that the operating chamber Py serves as a cooperative damping chamber 9.

COPYRIGHT: (C)2000,JPO